



## Nuclear Electric Plc. and Bently Nevada UK Ltd. sign collaborative agreement

**N**uclear Electric Plc. (Public Limited Company) and Bently Nevada's office in the United Kingdom (BNUK) recently signed a collaborative agreement to market their combined technical services in the field of Plant Integrity Assessment. Plant Integrity Assessment is an effective way to manage a system through condition monitoring and subsequent fault diagnosis, component redesign and redefinition. Commercial considerations and current legislation also require up-to-date technical assurance that operating safety and product reliability targets are achieved.

Bently Nevada's Machinery Diagnostic Engineers will normally define the dynamic behavior of a machine and, by use of vibration and other data, identify machinery problems relating to rotor/bearing/structure design. Often, however, the investigation of serious plant integrity problems requires the additional services of a specialist who can analyze and evaluate in order to allow continued safe operation. This is called an integrity assessment.

Nuclear Electric, which was formerly part of the now privatized Central Electricity Generating Board, owns and operates all the

nuclear power plants in the United Kingdom. Their Technology Division provides comprehensive engineering and scientific support to power plants, on the nuclear reactors and power generation machinery. Their facilities include some of the most comprehensive test laboratory resources available anywhere in the world. These resources include plant monitoring, safety assessment, inspection and repair, materials, stress analysis, dynamics, and quality assurance.

In-house, Nuclear Electric's engineers conduct all of the structural integrity assessment work necessary to maintain the safety cases required for their power plants to retain operating licenses. This engineering and scientific expertise provides a unique, multi-disciplinary integrity assessment service to industry, which is complemented by Bently Nevada's expertise in rotating equipment monitoring and diagnostic services.

Through this collaboration, Bently Nevada and Nuclear Electric can offer a complete, fast response, worldwide integrity assessment service to a wide range of industry. The following are examples of work completed under this collaboration agreement:

- Investigation of a gearbox shaft failure, which identified a design defect, recommendation of a short-term contingency measure and the offering of a redesign proposal, which was adopted by the gearbox manufacturer.
- Plant piping vibration measurements and an integrity assessment of piping following fatigue failure problems.

### Integrity Management Seminar

BNUK and Nuclear Electric will present the first of a series of seminars on Integrity Management on 12-15 May 1992. The seminars will address the question of condition management of rotating equipment and structures and introduce the concept of whole life integrity assessment. On completion, the qualified plant engineer will have an overview of the necessary principles to enable him to direct an integrity assessment. If you are interested in the seminar or consulting services, please contact Glenda Cave at Bently Nevada (UK) Ltd., 2 Kelvin Close, Science Park North, Birchwood, Warrington, WA3 7PB, Cheshire, England. Telephone: (0925) 818504 or Fax: (0925) 817819.